BEDROCK AND SURFICIAL GEOLOGY
ST. QUENTIN, NEW BRUNSWICK

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J. L. Davies and A. A. Seaman

INTRODUCTION

This work was undertaken at the request of the New Brunswick Department of Municipal Affairs. The observations reported herein were gathered in the summer and autumn of 1982.

St. Quentin is situated in Restigouche County along highway 17 approximately 97 km southwest of Campbellton. The village is built on gently rolling terrane drained to the north and northeast by Five Finger and Jardine Brooks, both tributaries of the Restigouche River.

BEDROCK GEOLOGY

The geology of the region was mapped in the early 1970's by St. Peter (1977). The results of this work are available at scales of one inch equals one quarter mile (1:15,840, map area J-6), or 1:50,000 (Kedgwick 21 O/11).

The region surrounding St. Quentin is underlain by folded, carcareous rocks of the Matapedia Group. These rocks are in turn underlain by turbidites of the Grog Brook Group that outcrop north and east of St. Quentin. Brachiopods, trilobite, and graptolite fossils found in Matapedia Group rocks on the Restigouche, Upsalquitch and Matapedia Rivers indicate a late Ordovician to early Silurian age (440 to 430

million years old).

Small outcrops of Matapedia Group rocks were seen in two locations within St. Quentin, one at the northeast corner of the Ecole Polyvalente and the other at the rear of Place Restigouche. Other exposures were examined one km west of the village, along highway 17 on both sides of the Five Finger Brook bridge, and near St. Martin de Restigouche. The rocks within the village comprise thin bedded tightly folded pale grey-green and dark grey argillaceous limestone and calcareous shale. Small scale folds with 1/2 wavelengths of 17 to 20 cm were observed in both outcrops. At the Polyvalente exposure axial plane cleavage strikes 10° and dips steeply west, whereas at Place Restigouche the vertical axial planes of small scale folds strike 70°. Plunges are steep to vertical at both localities. St. Quentin lies near the axial trace of a southerly plunging anticlinorium (St. Peter, 1977).

No occurrences of base metals or industrial minerals are known in the St. Quentin area.

SURFICIAL GEOLOGY

Only one surficial geologic unit is present within the village of St. Quentin.

The village lies within an area which has been mapped as a disintegration moraine by Gauthier (1982). Observations indicate that this material consists of a generally dense silty to silty stony till. Gauthier (1982) has indicated that this material is typically from 1 to 5 m thick. These figures are supported by data from water-well records (Department of

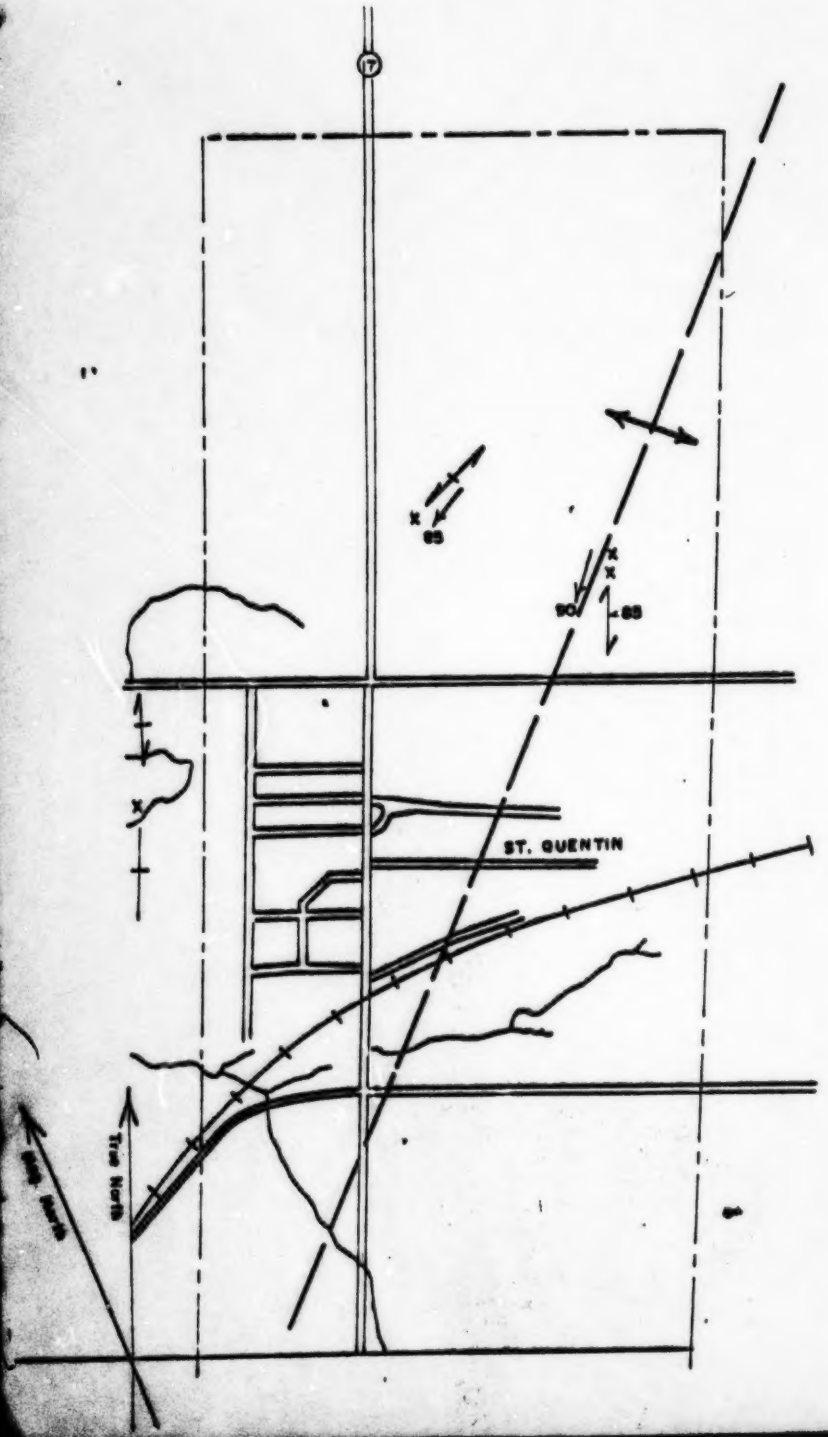
Environment files). Removal of approximately 1.5 m of till at the northeast corner of the Polyvalente has revealed the outcrop referred to above.

Gauthier (1982) has mapped two alluvial channels in the area, one passing through the south-central portion of the village, and another which lies on the northwestern edge of the village. Observations indicate that these channels are erosional features, containing thin (less than 1 m) peat and muck, but no fluvial sediments. Minor channel scars along the hill sides also appear to be of an erosional nature. There are no surficial aggregate sources within the village limits. However, Department of Transportation data indicates that aggregate of generally poor to fair (locally good) quality is present nearby, along Five Finger and Little Five Finger Brooks (to the east and west of the village respectively).

REFERENCES

Gauthier, R. C., 1982. Surficial geology, northern New Brunswick. Geological Survey of Canada, Open File Report 856 (nine maps, scale 1:100,000).

St. Peter, C., 1977. Geology of parts of Restigouche, Victoria and Madawaska Counties, northwestern New Brunswick. New Brunswick Department of Natural Resources, Mineral Resources, Report of Investigation 17, 69 p.



GEOLOGICAL SKETCH-ST. QUENTIN, N.B.

Bedrock consists of argillaceous limestone, and shaly limestone of the Matapedia Group

SYMBOLS

- Outcrop
- Bedding (vertical)
- Cleavage (vertical, inclined)
- Plunge of minor fold
- Trace of anticlinal axial plane
- Railway
- Village limit
- Highway 17

Scale

0 100 300 500 1000 Metres

0 1000 2000 3000 4000 Feet